



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/737,053 | 12/16/2003 | Patrick Badgley | AD027/000AD | 4767 |

24350 7590 07/26/2005

STITES & HARBISON, PLLC
400 W MARKET ST
SUITE 1800
LOUISVILLE, KY 40202-3352

| |
|----------|
| EXAMINER |
|----------|

CASAREGOLA, LOUIS J

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3746

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------|------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/737,053 | BADGLEY, PATRICK | |
| | Examiner | Art Unit | |
| | Louis J. Casaregola | 3746 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-13, 15-16 is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8, 10-11, 14 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC 112

Claims 10, 11 and 14 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims recite that the driving or working fluid, i.e. fluid that drives the claimed expander, is selected from a group consisting of air, propane, butane, etc. This limitation is inaccurate and misleading. As disclosed, the working fluid that drives expander 14 in this case is combustion gas from combustor 18 rather than one of the fluids listed in the claims. It appears that the present claim languages confuses the fuel and/or oxidizer burned to produce the working fluid with the working fluid itself.

Claim Rejections - 35 USC 102

Claims 1-3, 6-8, 10 and 11 are rejected under 35 USC 102(b) as being anticipated by Sieck.

Sieck discloses an engine system including all features of the apparatus recited in the present claims. Attention is called for example to Seik's Figure 1; note positive displacement compressor 11, positive displacement expander 12, interconnecting shaft 77, combustor 10, and recuperative heat exchanger 20.

Art Unit: 3746


Allowable Subject Matter

Claims 12, 13, 15 and 16 are allowed. Claims 4, 5 and 9 also contain allowable subject matter and will be allowed if rewritten in independent form.

Additional References

Takahashi and Palmer are cited as disclosing further pertinent examples of engines comprising positive displacement compressors and expanders.

L. J. Casaregola
571-272-4826 (M-F; 7:30-4:00)
571-273-8300 FAX
July 19, 2005


LOUIS J. CASAREGOLA
PRIMARY EXAMINER

If repeated attempts to reach the examiner by telephone are unsuccessful, the art unit supervisor, Timothy Thorpe, can be reached at 571-272-4444.

Information regarding the status of this application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR, and status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).